



1
cgactggagcagcaggacactgacatggactgaaggagtagaaagggtttaaaaaacccagtttgagaa ATG TCT AAG TCT GGG CTT CAT CTT
M S K S G L H L

93
GTA GCC TAC ATA TTA TTG ATA TTT TTA ATT TCA ACT AAT ATA GCA TCT AAA ATT TCT GGT GTT CCA TTA TGC AAC
V A Y I L L I F L I S T N I A S K I S G V P L C N

168
AAA GAT ACT TCA CCA GTA TTT ACA CTT CAA CAT AAT TCT ACT AAT GGT ATT TTA GCT AGA TCT CTT CCA CAA CCA
K D T S P V F T L Q H N S T N G I L A R S L P Q P

243
GGA TTA ATT GAT TGT TCA GAA CAT TGT TCC TCT TCG TCA GAT TGT ATT GGC GTT GAA TAT TGG CAG GGA ATT TGT
G L I D C S E H C S S S S D C I G V E Y W Q G I C

318
AGA GTT ATT TCT CAA GAT AAA ACT TCT ATT TAT ACA CCA ACA GAT GAA ACT TCA ATA CTT TTA ACA AAA TCA TGT
R V I S Q D K T S I Y T P T D E T S I L L T K S C

393
GTT AAA AGT GAT CGT ATA TGT TCA TCA CCA TTC CAT TTT GAT GTT TAT GAA CAA AAA ATA TTA GTT GGA TTT GCT
V K S D R I C S S P F H F D V Y E Q K I L V G F A

468
AGA GAA GTT GTA CCA GCT GAG TCT ATT GAA ATT TGT ATG GCT GCT TGT TTG AAT GCT TTT GAT ACA TAT GGT TTT
R E V V P A E S I E I C M A A C L N A F D T Y G F

543
GAA TGT GAA TCA GCT ATG TAT TAT CCA GTT GAT AGT GAA TGT ATT CTT AAT ACT GAA GAT AGA CTT GAT CGA CCA
E C E S A M Y Y P V D S E C I L N T E D R L D R P

618
GAT CTT TTT GTT GTT GAA AAA GAA GAT GTT GTT TAT TAT CTT GAT TCT AAT TGT GCT GGT TCA CAA TGT TAT GCT
D L F V V E K E D V V Y Y L D S N C A G S Q C Y A

693
CCA TAC ATT ACA CAA TAT ATT GCT GTT GAA AAT AAA CAA ATA GAA AAT GAA TTA GAT AGA AAA TTT GAA AAT ATT
P Y I T Q Y I A V E N K Q I E N E L D R K F E N I

768
GAT TTC CAA ACA TGT GAA GAA TTA TGT ACT GGT AGA ATT ACT GTT ACA CAA AAT GAT TTT ACT TGT AAA TCA TTT
D F Q T C E E L C T G R I T V T Q N D F T C K S F

843
ATG TAT AAT CCT GAA ACA AAA GTT TGT TAT CTT TCT GAT GAA CGT TCA AAG CCT CTT GGA CGG GCT AAA TTA AGT
M Y N P E T K V C Y L S D E R S K P L G R A K L S

918
GAT GCT AAT GGA TTT ACT TAT TAT GAA AAA AAA TGT TTT GCA TCT CCA AGA ACA TGC CGT CAA ACA CCA TCA TTT
D A N G F T Y Y E K K C F A S P R T C R Q T P S F

993
AAT AGA GTA CCA CAA ATG ATT CTT GTT GGT TTT GCT GCA TTT GTT ATG GAA AAT GTA CCA TCT GTT ACT ATG TGC
N R V P Q M I L V G F A A F V M E N V P S V T M C

1068
CTT GAT CAA TGT ACA AAT CCA CCA CCA GAG ACA GGT GAA AAA TTT GTC TGT AAA TCT GTT ATG TAC TAT TAT AAT
L D Q C T N P P P E T G E K F V C K S V M Y Y Y N

1143
GAA CAA GAA TGT ATT CTT AAT GCT GAA ACA AGA CAT ACA AAG CCA GAT CTT TTT ATT ACA GAA GGA GAT GAA TTT
E Q E C I L N A E T R H T K P D L F I T E G D E F

1218
CTT GTT GAT TAT TTT GAT ATT TCA TGT CAT CTT GAA CCA GAA ACA TGT CCT AAA GGA ACA TAT TTA AAA GGA ATT
L V D Y F D I S C H L E P E T C P K G T Y L K G I

1293
AAA TCT ATC AAT TCT GCA CTT CCT GAG GGT GAA GGC TCA CTT CAT GTT ATT GAG TCT GCT GGA AAA TCA TTA GAA
K S I N S A L P E G E G S L H V I E S A G K S L E

1368
GAA TGT ATG GAA AAA TGT AAC CAA CTT CAT CCA GAA AAA TGT AGA TCA TTT AAT TTT GAA AAA TCA TCT GGA TTA
E C M E K C N Q L H P E K C R S F N F E K S S G L

1443
TGT AAT CTT TTA TAT CTT GAT GGA AAA AAT ACT TTA AAA CCA TTT ATT AAA AAT GGA TTT GAT CTT GTT GAT TTA
C N L L Y L D G K N T L K P F I K N G F D L V D L

FIG. 1A

Page 2 of 16
Appl. No.: 10/771,708
Response to Notice of Allowability dated April 18, 2005
Replacement Sheet

1518
CAA TGT TTA TCA ACT AAA AAA GAT TGC TCT ACA AAA AAG AAT GAT ATT AAT TTT GTT AAA TAT CTT TAC TCT CAT
Q C L S T K K D C S T K K N D I N F V K Y L Y S H
1593
TTT GTT AAA TAT CTT TAC TCT CAA CAA CCT GGA ATT CCA ACA AAA ACA GAA AAA GTT ATT GGT ATT TCT AAA TGT
F V K Y L Y S Q Q P G I P T K T E K V I G I S K C
1668
CTT GAT TTA TGT ACT GAT AGT GAA CGT TGT GAA GGA CTT AAT TAT AAT AGA AGA ACT GGA GAA TGT CAA TTA TTT
L D L C T D S E R C E G L N Y N R R T G E C Q L F
1743
GAA ATT ATT GAT GGA CCT TCT AAT CTT AAA AAA TCT GAG CAT ATA GAT TTT TAT CAA AAT CTT TGT TCT ACT AAA
E I I D G P S N L K K S E H I D F Y Q N L C S T K
1818
GAA AAT GAA GCT GGT GTT TCA TCT GCA TTA AAT GTA CCA CAA TCA TCT GTT ATT CCT ATT TCA TCA TCA CAA AAT
E N E A G V S S A L N V P Q S S V I P I S S S Q N
1893
ATT AGT AAA AGT GAT GTT TTT GCC AAA AAA AAT CTT AAT AAA GAT GGT AAT AAT CAA GTA AAC ATT TAT GAA CCA
I S K S D V F A K K N L N K D G N N Q V N I Y E P
1968
GAA AAA AAA TAC CAT CCA AAA GGA TCA AAA AAT GAA ACA TCA TAT GAA ACA GGA ACT GTA AAT AAA TCA AAT GTT
E K K Y H P K G S K N E T S Y E T G T V N K S N V
2043
GAA GAG GTT TCT GAA ACT TTA ACT AAT AGT GGA GTT GAA AGT GGA AGT CTT GAA AAA AAT ATT ATT ACA GCA CCA
E E V S E T L T N S G V E S G S L E K N I I T A P
2118
CCA TCT ATA CCA AAA ATT CCT GAA GGT CCA CTA CCA GTG CCA ATT TTA ATT CCA GCT GAT CAA GTA CAA ACT ATT
P S I P K I P E G P L P V P I L I P A D Q V Q T I
2193
TGT GAT TAT GAA GGT ATT AAA GTA CAA ATT AAA TCA CCA CAA TCA TTT ACT GGT GTT ATC TTT GTT AAA AAT CAC
C D Y E G I K V Q I K S P Q S F T G V I F V K N H
2268
TAT GAA ACA TGT CGT GTT GAA GTT TCC AAC TCT GAT GCA GCT ACT CTT GAG CTT GGT CTT CCA GCT TCA TTT GGA
Y E T C R V E V S N S D A A T L E L G L P A S F G
2343
ATG AAA CCA GTT ACA CTG TCT GCT ACA TCT TCA GAT TCT ACC TCT TCA CAG AAT ATT ACT TCT AAT AGT GGA CAT
M K P V T L S A T S S D S T S S Q N I T S N S G H
2418
AAA GTT GTT GGA AGA GCA CGC CGT GAT ACA CAA GAA AAA TCT TGT GGT CTT ACA GAA ATT GAA AAT GGA AAA TAT
K V V G R A R R D T Q E K S C G L T E I E N G K Y
2493
AAA AGT ACT GTT GTT ATA CAA ACA AAT AAC CTT GGA ATT CCT GGA CTT GTA ACA TCA ACA GAT CAA ATT TAT GAA
K S T V V I Q T N N L G I P G L V T S T D Q I Y E
2568
ATT GGT TGT GAT TAT AGT AGT ATG TTA GGA GGA AAA ATT ACT ACA GCA GCT AAT ATG ACT GTA AAT GGA CCA ACA
I G C D Y S S M L G G K I T T A A N M T V N G P T
2643
CCA ACT GAT ATT AAA CCT AGA GGT AAA ATT GAA CTT GGA AAT CCT GTT CTT ATG CAA ATG AAT GCT GGT ACA GGT
P T D I K P R G K I E L G N P V L M Q M N A G T G
2718
GAT CAT CAG CCA ATT TTA CAA GCT AAA CTT GGA GAT ATT CTT GAA TTA AGA TGG GAA ATT ATG GCT ATG GAT GAA
D H Q P I L Q A K L G D I L E L R W E I M A M D E
2793
GAA CTT GAT TTC TTT GTT AAA GAT TGT CAT GCA GAA CCT GGT ACT GGT GCT GGA GGA GAT GAA AAA CTT CAG CTT
E L D F F V K D C H A E P G T G A G G D E K L Q L
2868
ATT GAA GGT GGA TGC CCA ACA CCA GCT GTT GCT CAA AAA CTT ATT CCA CAA CCA ATA AAA TTA CAA TCA TCA GCT
I E G G C P T P A V A Q K L I P Q P I K L Q S S A
2943
GTC AAA ATT GCC CAT CTT CAA GCT TTC CGT TTT GAT TCA TCC TCT TCA GTT AGA ATA ACA TGT AAT ATT GAA ATT
V K I A H L Q A F R F D S S S S V R I T C N I E I
3018
TGT AAG GGA GAT TGT AAA CCA GCA ACA TGT GAT ATG CAC GGA GAA TCA AAA CAA TCA TGG GGA AGA AAA AAG AGA
C K G D C K P A T C D M H G E S K Q S W G R K K R
3093
CAT ATT GAA GAT GAT ACA ATT ACA GAA TTT GAG ACA AAT CGT TAT AAA GTT CCA AGA TTT TCA CAA GCA ACA ACA
H I E D D T I T E F E T N R Y K V P R F S Q A T T

FIG. 1B

3168

TCT CTT TTA ATT CTT GAT CCA CTT CAA AAT AAC ATT GAA CCA GCA TCA TTA ATG TCA AAA GTA TCA TCT CTT GAT
S L L I L D P L Q N N I E P A S L M S K V S S L D

3243

TTG TTA GCT GAA GAT CCT GCA AAA ACA TTA CTT AAG ATT AAA GAG ACT GCA CAT TTG AAT GGA AAT CTT TGT ATG
L L A E D P A K T L L K I K E T A H L N G N L C M

3318

GGA AAA ATT ACA CTT TTC TCA GTA TTT GGT GTT CTT CTT TCA TTA ATT GTT GTT CAA GCA ATT GTC GTA ACA AAT
G K I T L F S V F G V L L S L I V V Q A I V V T N

3393

TAT ATT TTT AAA AGA GTT ATG TCA AGC AGA AAG ATT ACC AAT TAAactttaataattaacaataattataaatatgcctttatgt
Y I F K R V M S S R K I T N

3479

tctcaaaacgagtataatcctttttttgttattaatttttagtatcaaaatatatacccgatggcatttacaataataataaatacaactgaagaaag

3579

ctataatatgaaccgtgccagaaacttattcaaagtttttaattctctctctctctcttctaatttcctttcaaaacattccattttttttttgttt

3679

ttatttaatacaaaaaataataattaatagtaatttatgatatatcattaatatttttataatatttttttg

FIG. 1C

Page 4 of 16
Appl. No.: 10/771,708
Response to Notice of Allowability dated April 18, 2005
Replacement Sheet

1
ggcacgagaa ATG AAC TGG CTA TCT ATA GCT TCA ATT TGT ACA TTC TTA ATT ATA CCA ATA TCT GCT GTC TTT GAA
M N W L S I A S I C T F L I I P I S A V F E
77
TGT TCA GGA TCA GAA ACT ACA GCA TTT ATT AGA ATA TCC AGA GCA CGC CTT GAT GGG ACA CCA GTA GTT ATT TCT
C S G S E T T A F I R I S R A R L D G T P V V I S
152
ACA GCA GGA CAT GAC TTG ACT TGT GCA CAA TAT TGT AGA AAT AAT ATT GAA CCA ACA ACT GGT GCT CAA CGT GTC
T A G H D L T C A Q Y C R N N I E P T T G A Q R V
227
TGT GCA TCA TTT AAT TTT GAT GGT CGT GAA ACA TGC TAC TTT TTT GAT GAT GCT GCC TCA CCT GCT GGG ACT GGG
C A S F N F D G R E T C Y F F D D A A S P A G T G
302
GAG TTG AAT GAA GCA CCA TCA GCT AAT AAT TTT TAT TAT GAA AAA GTT TGC CTT CCA GCT ATC TCT GCT CAT GAA
E L N E A P S A N N F Y Y E K V C L P A I S A H E
377
GCA TGT ACT TAT AGA TCA TTT TCA TTT GAA AGA ACT AGA AAT ACT CAA TTA GAA GGT TTT GTT AAA AAA TCA CTA
A C T Y R S F S F E R T R N T Q L E G F V K K S L
452
CAA GTT ACA TCA CGT GAA GAA TGC CTT TCT ACA TGT TTA AAA GAA AGT GAA TTT GTA TGT AGA TCA GTT AAC TAT
Q V T S R E E C L S T C L K E S E F V C R S V N Y
527
AAT TAT GAA AAC TTT ATG TGT GAA CTT TCA ACA GAA AGA TCG CGT TCT AAA CCA CAA AAT ATG AGA ATG TCA GCA
N Y E N F M C E L S T E R S R S K P Q N M R M S A
602
GCT CCA GTT GAT TAT TAT GAT AAT AAT TGT TTA AAT AGA CAA AAT AGA TGT GGT GAA TCT GGT GGA AAT TTG ATT
A P V D Y Y D N N C L N R Q N R C G E S G G N L I
677
TTT ATT AAA ACA ACA CAA TTT GAA ATT CAT TAT TAT GAT CAT ACT CAA TCA ATG GAA GCA CAA GAA TCA TTC TGT
F I K T T Q F E I H Y Y D H T Q S M E A Q E S F C
752
TTA CAA AAA TGT TTA GAT TCA TTA AAC ACC TTC TGT AGA TCT GTT GAA TAT TCT CCA TCT GAA AAA AAT TGT ATT
L Q K C L D S L N T F C R S V E Y S P S E K N C I
827
GTT TCT GAT GAA GAT ACA TAT TCA AGA GCT GAT CAA CAA GGT GAA GTT AAT AAT AAA GAT TAT TAT GAA CCT GTT
V S D E D T Y S R A D Q Q G E V N N K D Y Y E P V
902
TGT GTT GCT GCT GAT CTT AGT TCA TCT ACA TGT CGT CAA CAA GCT GCT TTT GAA AGA TTT ATT GGT TCT GCT ATT
C V A A D L S S S T C R Q Q A A F E R F I G S A I
977
GAA GGT ACC CCA GTT GCT ACA GCA CAA CAA GTA ACC ATT TCT GAT TGT ATT TCA CTT TGT TTC CAA AAT TTG AAT
E G T P V A T A Q Q V T I S D C I S L C F Q N L N
1052
TGT AAA TCA ATT AAT TAT GAT CGT ACA CAA TCT ACA TGT TAT ATT TAT GCT GTT GGA AGA CAA GAA TCT AAT GTT
C K S I N Y D R T Q S T C Y I Y A V G R Q E S N V
1127
AAA AAT GAT GCA AGT TTC GAT TAT TAT GAA TTT ACA ATT ATT GAT AAT GGA TGC CCA AGA TAT CCT GCT CTT GTA
K N D A S F D Y Y E F T I I D N G C P R Y P A L V
1202
GGG CCA GTT TTA CAA GAT TTC GAC AAA AAT CGT CTT AAA TCT GAA ATG AAA GCA TTC CGT TTA GAT GGA TCA TAT
G P V L Q D F D K N R L K S E M K A F R L D G S Y
1277
GAT ATT CAA ATT GAA TGT TCT GTT ATG TTT TGT GCT GGT CCA ATG GGT TGT CCA CCA TCT AAT TGC CTT GAT TCA
D I Q I E C S V M F C A G P M G C P P S N C L D S
1352
GGA ACA AAT GAA TTA TTT GCT TCA CAT GGA AGA AAG AAA AGA AGT ATT GTT GAT TTC AAA AAT ACA ACA ACA TCT
G T N E L F A S H G R K K R S I V D F K N T T T S
1427
GCA GAA ACA TTA TCT GCT ATA ATT AGA GTA CTT GCT GCT GGA GAA GAA GAA TTA GAA GTT GAA GAA TTT TAT AGA
A E T L S A I I R V L A A G E E E L E V E E F Y R
1502
AAT GAT ACT AAT TTT AAA TAT GAT TCT GAA GAA AAT ATC TCA GCT CAT AAC TTA TAC TGT ATG TCT GAA ATG TGG
N D T N F K Y D S E E N I S A H N L Y C M S E M W

FIG. 2A

1577

TTT GTA TCA GGA ATT GTT TCA ATG GCT ATG ATC TGT CTT CTT CTT TCT GTT CTT ATA GTT ATG TGG GGC TGT CAT
F V S G I V S M A M I C L L L S V L I V M W G C H

1652

TCA TTA AAT CAA TCT TCA AAA TTA CCA ATG TGAaggaagatctttcaacaaaaaaaaacgattaatttttaatatatttctttaatatatac
S L N Q S S K L P M

1742

attccataatcagtatataactataataattgcaacataataattttattgtagaagtctgtttataaaatcaaatcacaaattttcttttacagtactgt

1842

gcacaacaacaagaaattccaatctcttcctatatatttgatgtcgtagacacggtttataaaaacaaattcttttggttttaatacagttttcagttttaca

1942

tttatataat

FIG. 2B

Page 6 of 16
Appl. No.: 10/771,708
Response to Notice of Allowability dated April 18, 2005
Replacement Sheet

1
cgctcgatagtcgcatgttttttaaggttaattaccaagcttaaggaatatttgaagcttatttttaagaaaaataaattaaataagagattagcaca

101
acaacaacagaaatttttcttgaatttacaacaaaataatttttcttaattaaattcctttaattatccacaacttct ATG GTT ACA AAA ATC
M V T K I

196
CCA ACT TTT CCC CTC CTT TTT ATT TTC CCA TTT TTA TTT ACA TTT TTA ACG ACA AAA TGT CAG GCT TAT TCT ATA
P T F P L L F I F P F L F T F L T T K C Q A Y S I

271
CCA TTA ATA TCA GAA TGT AAT TCG GAA GAA GCC CCA GTT TTT CTT TTG CAA CGG AAT GTT TCT TCT ATC GCC GGA
P L I S E C N S E E A P V F L L Q R N V S S I A G

346
ACT GAG CCT TTA AGA ACT GTT CCT GTT ACA GGG GGA TTT TTG GAA TGT GCG GAA CTT TGT TCA GCA GCA AAT AAT
T E P L R T V P V T G G F L E C A E L C S A A N N

421
TGT GTT GCT GTT AAA TTT TCT ATT GAA AAA CAA TGC CAA TTG TTG GGG AAA ACA ACT ATG ACA GCA ACA ACT TTA
C V A V K F S I E K Q C Q L L G K T T M T A T T L

496
TCT TTA CAA GAC ATT AAT TTG ACA CTA GCT AGA TTA GCT ACT AAA AGT TGT GTT AAG AGC AAA AAA ATC TGT TCT
S L Q D I N L T L A R L A T K S C V K S K K I C S

571
TCC CCC TTC CAT TTT GAT GTT CAC GAA CAA AAA ATA CTT GTT GGT TTT GCT AGA GAA GTT GTA TCA GCA GAA TCT
S P F H F D V H E Q K I L V G F A R E V V S A E S

646
ATA CAT CAA TGT TTA ACT GCT TGT TTA GAT GCT GTT GAT ACT TTT GGC TTT GAA TGC GAG TCA GTA ATG TAT TAT
I H Q C L T A C L D A V D T F G F E C E S V M Y Y

721
CCA TTG GAT GCC GAA TGT ATT TTA AAT ACA GAA GAC AGA CTT GAC CGT CCA GAT TTG TTT GTT GAT GAG AAG GAA
P L D A E C I L N T E D R L D R P D L F V D E K E

796
GAT ACT GTT GTT TAT TTG GAT AAT AAT TGT GCT GGA TCC CAA TGT CAT GCC CCT TAT GTA ACC CAA TAT GTA GCT
D T V V Y L D N N C A G S Q C H A P Y V T Q Y V A

871
GTT GAA GGA AAA CAA TTA GCT GAG GAA TTG GAT CAT AAT TTT GAG GGA ATG GAG TTG ACA GAA TGT GAA CAG CTT
V E G K Q L A E E L D H N F E G M E L T E C E Q L

946
TGT AAT CAA AGA TTG AGT GTT TCT GCA AAT GAC TTT AAT TGC AAA GCA TTT ATG TAC AAT AAC CAA ACA AGA TCT
C N Q R L S V S A N D F N C K A F M Y N N Q T R S

1021
TGT ATT CTT TCT GAT GAA CGT TCA AGA CCT TTG GGT AGA GCT AAT TTG ACA GAT GCT AAA GGA TGG ACT TAT CAC
C I L S D E R S R P L G R A N L T D A K G W T Y H

1096
GAG AAA AAA TGT TTT GCC TCC CCA CGT ACA TGC CGA AAT GTT CCT TCT TTT ACC CGC GTC CCT CAA ATG TTA TTA
E K K C F A S P R T C R N V P S F T R V P Q M L L

1171
GTT GGA TTT GCC TCT TTT GTA ATG GAA AAT GTC CCT TCA GTA ACT ATG TGT TTG GAT CAA TGT ACA AAT CCT CCC
V G F A S F V M E N V P S V T M C L D Q C T N P P

1246
CCA GAA ACT GGA CAA AGT TTT GTT TGT AAA TCT GTC ATG TAT TAT TAT AAT GAG CAA GAA TGT ATT TTA AAT GCT
P E T G Q S F V C K S V M Y Y Y N E Q E C I L N A

1321
GAA TCA CGT CAT TCC AAG CCA GAT TTA TTT ATT CCC GAA GAA GAC GAT TTT GTT GTA GAT TAT TTT GAT ATA AAT
E S R H S K P D L F I P E E D D F V V D Y F D I N

1396
TGC CGT CTA GAA CAA GAA CAA TGT ATC GAT GGA AGA ACG CCC CAA TTA GTT AGA ACA ATT AAT TCT GCA CTT CCA
C R L E Q E Q C I D G R T P Q L V R T I N S A L P

1471
GAA GGG GAG GGG TCT ATA CAT GTT TTG GAA ACA ATT AAG GGA GGA GTT CAG CAA TGT GCT AAA AAA TGT TCT GAA
E G E G S I H V L E T I K G G V Q Q C A K K C S E

1546

FIG. 3A

Page 7 of 16
Appl. No.: 10/771,708
Response to Notice of Allowability dated April 18, 2005
Replacement Sheet

CGC GCC CCA GAC AAA TGT CGC TCT TTC AAT TTT GAT AAA CAA GCT GGT AAT TGT AAT TTA CTT TAT TTG GAT GGA
R A P D K C R S F N F D K Q A G N C N L L Y L D G
1621
CAA GGG TCT TTA CGA CCA GAG CAA AAG ACA CAA TTC GAT TTA TAC GAT GTT CAT TGT TTG AGT GGA ACA TCT CAA
Q G S L R P E Q K T Q F D L Y D V H C L S G T S Q
1696
CTT TTA GGA GAA AAT TCT AAA CAT TCT CCC TCT GCT TGT GTT GAC CCA GAA GGG GCT ATT TTT AGT CGT TTC CTC
L L G E N S K H S P S A C V D P E G A I F S R F L
1771
TAC ACT CGT TGG GTA GCA AAT TCT CCC AAT CGT GAA ATT TCA AGT TTA CCA CTT TCC AAA TGT TTA AAT CTT TGT
Y T R W V A N S P N R E I S S L P L S K C L N L C
1846
TCG GTT GGA GGA GAA CAA TGT GAG GGT GTT AAT TAC AAT CGC CGA AAT GGT TCT TGT CAA TTA TTT ACT TCC CTT
S V G G E Q C E G V N Y N R R N G S C Q L F T S L
1921
CTA TTA AAC TCT TCT CCA AAT TCT CAA CAA GAC AAA GAC GAA CAT GTT GAT TTT TAC AGA AAT ATT TGT AGA GTT
L L N S S P N S Q Q D K D E H V D F Y R N I C R V
1996
AAG GAA TCG AAA AGT GAT AGT GGG GCT GCT AAT GTA CCC AAA ACA CAA CAA GCA ACG GCT GCA CCT CCC CCT TCT
K E S K S D S G A A N V P K T Q Q A T A A P P P S
2071
GTT CAA TTA ACT ACT AAA CCT CCA CAA ATT CGT GAT TTA AAC AAC AAC AAT AAA ACA ACA CAC AAA GAA CCA AAT
V Q L T T K P P Q I R D L N N N N K T T H K E P N
2146
ATT AAA CTT CCA CCA CAA TCA GCA AAA CCT ATA AAT GGA AAA ACT GGA AAG GAA CAA CTT CCT GTA GGG TCA AAA
I K L P P Q S A K P I N G K T G K E Q L P V G S K
2221
TCT TTT GGG GTT ACT AAT ACG CGT GAT GAT GGG GAG AAT TCA ATA ACT GGA ACT GCT CCT CCT CCT GTA GAT GGC
S F G V T N T R D D G E N S I T G T A P P P V D G
2296
AAA TTA ATT ATT AAA CCT TCA CCA CAA GTT TCT ATT CCC TCC CCT GTA CTT ATT CCG GCA CAA GAA GTA CAT ACT
K L I I K P S P Q V S I P S P V L I P A Q E V H T
2371
ATT TGT AAT TAT GAA GGA ATT AGT GTT CAA ATT AAA CAT TCT TCT CCA TTC TCT GGC GTT GTT TTT GTT CGA AAT
I C N Y E G I S V Q I K H S S P F S G V V F V R N
2446
AAA TAT GAT ACT TGC CGT GTG AAG TTG AAG GAA AGG ACA GCG TTG TTT TGG TTT TGG GGC TTC CAG CAA ATT TTG
K Y D T C R V K L K E R T A L F W F W G F Q Q I L
2521
GAA ATG AAG CCA ATT GCT TTA ATT AAT TCA CAA AAA CAT GGA AAA GGG AAT AAA ACA CAC GGA GAT ACT TTA CTT
E M K P I A L I N S Q K H G K G N K T H G D T L L
2596
TCT ATT GAA GGT TCC AAA AAA CAA ATT GAA GGG GGT TCT TCA ACT GAA GAT ATT CAA TTA ATA AAT TCT CAA AAA
S I E G S K K Q I E G G S S T E D I Q L I N S Q K
2671
GAC CTT AAA CGT TCA AGA AGA CAA TTA CAA AGA GAT TGT GGA TTA CAA GAT ATG GAC AAT GGA ACT TAC AAA ACT
D L K R S R R Q L Q R D C G L Q D M D N G T Y K T
2746
GTT ATT GTT GTC CAA ACA AAT AAT TTG GGA ATT CCG GGA CTT GTT ACT TCT ATG GAC CAA CTT TAT GAG ATT TCC
V I V V Q T N N L G I P G L V T S M D Q L Y E I S
2821
TGT AAC TAT TCA AGT ATG TTG GGA GGC AAA GTC CAA ACA GCA GCT GCA TTA CGT GTT CAC GGT CCC CAA CCT TCA
C N Y S S M L G G K V Q T A A A L R V H G P Q P S
2896
CTA ATC CAG CCT CGC GGC AAA ATA GAA TTG GGA AAT CCT GTT TTG ATG CAA ATG GGG CCT GTA CGT AGT GAA AGG
L I Q P R G K I E L G N P V L M Q M G P V R S E R
2971
CAA AGT GGG GAA GGG CCT TTA ATT CAA GCT AAA TTG GGG GAT ATT CTT GAA TTA AAA TGG GAA ATT ATG GCA ATG
Q S G E G P L I Q A K L G D I L E L K W E I M A M
3046
GAT GAA GAA TTG GAC TTT TTA GTT CGT GAT TGT TTT GCA GAG CCG GGA ACT TCT GGA AAT CAA GGG GAA AGA CTT
D E E L D F L V R D C F A E P G T S G N Q G E R L

FIG. 3B

Page 8 of 16
Appl. No.: 10/771,708
Response to Notice of Allowability dated April 18, 2005
Replacement Sheet

3121
CCT TTA ATT GAG AAT GGT TGT CCA ACA CCA GCA GTA GCA CAA AAA TTA ATT CCA AAT CCA ATA AAA GCA ATT AAT
P L I E N G C P T P A V A Q K L I P N P I K A I N
3196
TCT GCA GTT AAA TTA ACT TAT TTA CAA GCA TTC AGA TTT GAC AGT TCT CCA GCT ATT AGA ATA ACT TGT CAT TTA
S A V K L T Y L Q A F R F D S S P A I R I T C H L
3271
GAA TTA TGT AAA GAA AAT TGT AAA TCG GTT AAT TGT AAA TTT AAT GAT GGA ATT AAA GAA TCG TGG GGC AGA AAA
E L C K E N C K S V N C K F N D G I K E S W G R K
3346
CGC CGT TTT GCT ATT GAC AAT AAC ATT AAT AGG AAA AAT GAA GTT AAA GAA TTC GAA ACT CGC CGT TTT GTC GTT
R R F A I D N N I N R K N E V K E F E T R R F V V
3421
CCC CGT TTT GCC CAA GCA ACA ACT TCT TTA GTT ATT GTA GAC CCT TTA CAA CAA CAA AAT TCT GTT ATA AAA ACA
P R F A Q A T T S L V I V D P L Q Q Q N S V I K T
3496
GAA CAA CAA CAA CAA CCA TTT ATT TCA CAT TCC TCA ATA TCT AAA CAA ATA TTT GAA AAT AAT AAA AAA GAA AAT
E Q Q Q Q P F I S H S S I S K Q I F E N N K K E N
3571
AAT AAA AAT ATA ACA AAA ACA GCT AAA AAA TCC TCT TCT CTT TTT GAA GCT TTT ACT GAG GCT GCT GGT GGA AGG
N K N I T K T A K K S S S L F E A F T E A A G G R
3646
AAA ATT AAT TTA GAA TTA ACA ACA ACA AAT TCA GAA CAA CAA CAA CTT TGT TTA CAT AAA TGG ACA CTT GGG GGT
K I N L E L T T T N S E Q Q Q L C L H K W T L G G
3721
GTT TTT GGA ACT CTT TTA ACA TTA ATT GTT GTT CAA AGC GGG GTT GCT GCT AAA CAT TTA ATT AAT CGA TTT ATT
V F G T L L T L I V V Q S G V A A K H L I N R F I
3796
GTT GGA AAA AGA ATT TAAaaaaaaaaaaaaaagtactagtcgacgcgtggcc
V G K R I

FIG. 3C

1
 GAG CAG AAG ATT TTG GTG GGT TTC GCG CGG GAG GTG GTC TCC GCC GAC TCA GTC CAC CGC TGT CTG
 E Q K I L V G F A R E V V S A D S V H R C L
 67
 TCC GCT TGT CTG AAT GCG TTC GAT ACG TTC GGC TTC GAA TGC GAG TCG GTC ATG TAT TAC CCT GTG GAC GCG GAA
 S A C L N A F D T F G F E C E S V M Y Y P V D A E
 142
 TGC ATT TTG AAC ACG GAG GAC CGA TTG GAT CGG CCT GAC CTT TTC GTG GAC GAG CAC GAG GAC ACG GTC ATC TAC
 C I L N T E D R L D R P D L F V D E H E D T V I Y
 217
 TTG GAC AAC AAT TGC GCC GGA TGT GAG TGC CAT TGG CAT TTT GAC AAT TTC AAA ACA AGC GGC ATT TTG AAC GAC
 L D N N C A G C E C H W H F D N F K T S G I L N D
 292
 CAA CAA TTC GCA ATT GCA GCA CAA TGT TAC GCA CCG TAC GTA ACG CAA TAC GTG GCG GTG GAA GGA CGC CAA TTG
 Q Q F A I A A Q C Y A P Y V T Q Y V A V E G R Q L
 367
 TCG GAC GAA TTG GAC CAC AGT TTT GAA GGG TTG GAG CTG AGC GAA TGT GAA GAG TTG TGC ACG CAA CGG TTA AGT
 S D E L D H S F E G L E L S E C E E L C T Q R L S
 442
 GTT ACG GCA AAC GAC TTC AAC TGC AAA TCG TTC ATG TAC AGT AAC TTG ACG CGC AGT TGC GTT TTG TCG GAC GAA
 V T A N D F N C K S F M Y S N L T R S C V L S D E
 517
 CGC TCG CGC CCT TTG GGC CGT GCC AAT TTG GCC GAA GTG CCG GGA TGG ACT TAT TTC GAG AGC CGC GGC GTT CCG
 R S R P L G R A N L A E V P G W T Y F E S R G V P
 592
 TCG TTT ACG CGA GTG CCG CAA ATG CTT TTG GTG GGC TTT GCC TCT TTT GTG ATG GAA AAT GTG CCG TCA GTG ACA
 S F T R V P Q M L L V G F A S F V M E N V P S V T
 667
 ATG TGT TTG GAC CAA TGC ACA AGC CCT CCT CCT GAG ACG GGA CAA AAC TTT GTG TGT AAA TCG GTG ATG TAC TAC
 M C L D Q C T S P P P E T G Q N F V C K S V M Y Y
 742
 TAC AAC GAG CA
 Y N E

FIG. 4

Page 10 of 16
Appl. No.: 10/771,708
Response to Notice of Allowability dated April 18, 2005
Replacement Sheet

1
cgactggagcagcaggacactgacatggactgaaggagtagaaaatttctgttgttcatttcttatcagactgtcccattcatcatcgtagaccactacca
101
gtattacttcaggacagtaaatattcgggtaaatttcggctgctcaatcggtaggaccgctttaat ATG CAT CTT TCC AAC CAT GCC TCA
M H L S N H A S
190
TCA CTT CTG CAT TAC TAT TCA CAT CTC ATC ATA ATT GCA TAC TTT TCT GTA TTT GCT TCA ATC GAA ATA CAA GAA
S L L H Y Y S H L I I I A Y F S V F A S I E I Q E
265
ATT CCA TCA TAT CCA GCA TGT AGC AAT GGC GAA TCA CCT GTC TTT TTA CTC CAA CAC AAT GCT ACA GCA GGT AAT
I P S Y P A C S N G E S P V F L L Q H N A T A G N
340
GTT CTG AAG CGA GCT TCA ACT TCA CAT CTG GTC GAC TGC ACT GAC CTT TGT TCA GCT AAC GAT GAA TGT TTG GCG
V L K R A S T S H L V D C T D L C S A N D E C L A
415
ATA ACC TAT GAA GAT AAA GAA TGC AAA ATG TTG TCA AGC ATT GGA GAA TCG ACA GGA CAT TTA AAT GAT TAT GTA
I T Y E D K E C K M L S S I G E S T G H L N D Y V
490
TTG CTG AGT AAA AAT TGT GCT AAA AGT GCG CGG ATC TGC TCA TCG CCA TTT CAA TTC GAT GTA CAC AGA CAA AAA
L L S K N C A K S A R I C S S P F Q F D V H R Q K
565
ATT TTG GTT GGG TTT GCT CGC GAG GTT GTG TCA GCT GAT TCA TTA TCG TTA TGT CTA TCA GCT TGC TTG AAT GCA
I L V G F A R E V V S A D S L S L C L S A C L N A
640
TTT GAT TCT TTC GGT TTT GAA TGT GAG TCG GTA ATG TAC TAT CCA GTT GAT TCA GAA TGC ATC CTA AAC ACC GAA
F D S F G F E C E S V M Y Y P V D S E C I L N T E
715
GAT CGT CTG GAT CGA CCT GAC TTG TTT GGG GAT GAA TTA GAT GAT AAC GTC ATT TAT TTG GAT AAC AAC TGT GCT
D R L D R P D L F G D E L D D N V I Y L D N N C A
790
GGA TCA CAG TGT TAT GCT CCA TAC ATA ACA CAA TAC ATT GCC GTC GCA AAT CGT CAG CTA GCT AAC GAG TTG GAC
G S Q C Y A P Y I T Q Y I A V A N R Q L A N E L D
865
AGA CAA CTG ATC GCT GAT CGT GAA TCA TGC GAG TCG TTA TGT ACT CAG CGA CTG TCT ACA ACG ACA AAC GAT TTC
R Q L I A D R E S C E S L C T Q R L S T T T N D F
940
AAC TGT AAA TCA TTT ATG CAT AAT CCG GAA ACT AAC GTT TGC ATA CTT TCT GAT GAA CGT TCT AAA CCA CTT GGT
N C K S F M H N P E T N V C I L S D E R S K P L G
1015
CGA GGC AAT CTA GTG AAA GCT GAC GGT TTC ACA TAT TAT GAG AAG AAA TGT TTT GCA TCA CCA CGA ACA TGT CGC
R G N L V K A D G F T Y Y E K K C F A S P R T C R
1090
AAT GTA CCG TCG TTT GAG CGC ATA CCT CAG ATG ATA CTT GTT GGT TTT GCT GCA TTT GTT ATG GAA AAT GTA CCT
N V P S F E R I P Q M I L V G F A A F V M E N V P
1165
TCA GTA ACG ATG TGC CTC GAT CAG TGC ACA AAT CCT CCA CCG GAA ACT GGA GAA AAT TTC GAA TGC AAA TCT GTG
S V T M C L D Q C T N P P P E T G E N F E C K S V
1240
ATG TAT TAT TAT AAC GAA CAG GAA TGT ATT TTA AAC GCT GAA ACA CGA GAA AAT AAA TCG GAA TTG TTT ATA CCG
M Y Y Y N E Q E C I L N A E T R E N K S E L F I P
1315
GAG GGA GAA GAA TTC CAA GTC GAT TAT TTT GAT ATC ACT TGT CAT CTG CGC CCT GAA ACA TGT CCA AAT GGC ACA
E G E E F Q V D Y F D I T C H L R P E T C P N G T
1390
ACA TTA CAT ACT GTA CGT ACG GTT AAT GCA GCA CTC CCT GAA GGC GAA GGA TCG ATC CAT ATT TTG CAG TCA GCC
T L H T V R T V N A A L P E G E G S I H I L Q S A
1465
GGG AAT TCG GTT GCT GAT TGC ATG ACA AAA TGT TAC GAG ATG GCT CCC GAG AAA TGT CGC GCA TTC AAT TTT GAT
G N S V A D C M T K C Y E M A P E K C R A F N F D

FIG. 5A

1540
AAG CAG ACA TCT GAC TGT GAC CTG CTG TAC GTT GAT GGG AAG ACA ACC TTA CGA CCA GCA GTC CAC TCG GGC ATT
K Q T S D C D L L Y V D G K T T L R P A V H S G I
1615
GAT CTC TAC GAC CTT CAT TGC CTA GAG CAG ACA AAA GTT TGC GCT CAG AAA AAC AAC GTA ACA CGA TTT TCG AGA
D L Y D L H C L E Q T K V C A Q K N N V T R F S R
1690
TAT TTG TAC AGT ATA TAT GAT GCA GTG CCA TCG CAA TTC TAC GAA GCA ACT GCC CTC ACA AAT TGT CTT AAT CTT
Y L Y S I Y D A V P S Q F Y E A T A L T N C L N L
1765
TGC GCA TAT ACC GAG CGT TGC GAA GGT GTA AAT TAC AAC AGA AGG AAT GGT CGT TGT GAA TTA TTT GAT AAG GTC
C A Y T E R C E G V N Y N R R N G R C E L F D K V
1840
GAA GGA AAT GGA AAG CCA AGT GAT TTC ACG GAT TTT TAC AAA AAT CTT TGT CTG GTG GAA GAA GTA GAA TCA GAA
E G N G K P S D F T D F Y K N L C L V E E V E S E
1915
TAT AGC GCC GCA GCT AAT GTT CCC AAA CAT CTC CTT CCG AAT GTT TCA CAT TCT GCA GTT ACT CAG AAA CAA GAA
Y S A A A N V P K H L L P N V S H S A V T Q K Q E
1990
GCT AAA TTA CAC ATT ATC TCA GCA AAA ACA AAG CCT TTC CTA CGC GAA CAG GAA GCA CAG CGA CGA GCT CCA GAA
A K L H I I S A K T K P F L R E Q E A Q R R A P E
2065
ACA ATA ACA GCG AAG TCG TCT TCA GCT TCC GGA AAA GTA AGT GGT GAA GCA GGA TCA TCA ACT ACA TTC AGC ATT
T I T A K S S S A S G K V S G E A G S S T T F S I
2140
TCT TCA TCC GGA AGG CTT CCA GGG CCA GTA GTC CAA ATT GCT CCA AAT GCA GTG CAA ACA GTT TGC AAT TAT GAA
S S S G R L P G P V V Q I A P N A V Q T V C N Y E
2215
GGC ATC AAA GTG CAG ATG GAG AAC CCC AAA GCC TTT TCG GGA GTG ATA TTT GTT AAA AAT AGG TAT GAA ACC TGT
G I K V Q M E N P K A F S G V I F V K N R Y E T C
2290
CGA GTA GAG GTT ACG GAT AGT GAA AGT GCA CCA CTA GTA ATT GGT TTA CCA CCG AAT TTT GGT TCA AAA ATG GTA
R V E V T D S E S A P L V I G L P P N F G S K M V
2365
GCT GAT GAA AAG GTT GCC GCA AGC GAA GCA AAT ATT CAA CCA GAA ATA TCC GGA GGC GAC AAA CTG GAT AAA CCC
A D E K V A A S E A N I Q P E I S G G D K L D K P
2440
GCT GAT GAA CTG CGC ATA AGA CGA CAA GCT TTA GAG CTA CAC AGA GAT TGC GGA ATC CAG GAT ATG AAC AAT GGT
A D E L R I R R Q A L E L H R D C G I Q D M N N G
2515
ACT TAT AAA TCA ACG GTG GTT GTA CAA ACA AAT AAC TTG GGT ATA CCT GGA CTG GTA ACT TCC ATG GAT CAG ATT
T Y K S T V V V Q T N N L G I P G L V T S M D Q I
2590
TTT GAA GTG AGC TGT GAT TAT AGT TCA ATG CTT GGT GGA AAA GTT ACT GCT GGT GCC AAT CTC ACA ATT GAT GGT
F E V S C D Y S S M L G G K V T A G A N L T I D G
2665
CCC GAA GCA TCT CTT ATT CAA CCC CGA GGA AAA ATC GAA CTT GGT AAC CCG GTG CTT ATG CAG ATG TTG AGT GGA
P E A S L I Q P R G K I E L G N P V L M Q M L S G
2740
CAA GGA GAA CCT GTC CTA CAA GCA AAA CTA GGT GAC ATT CTG CAG CTA CGA TGG GAA ATC ATG GCG ATG
Q G E P V L Q A K L G D I L Q L R W E I M A M

FIG. 5B

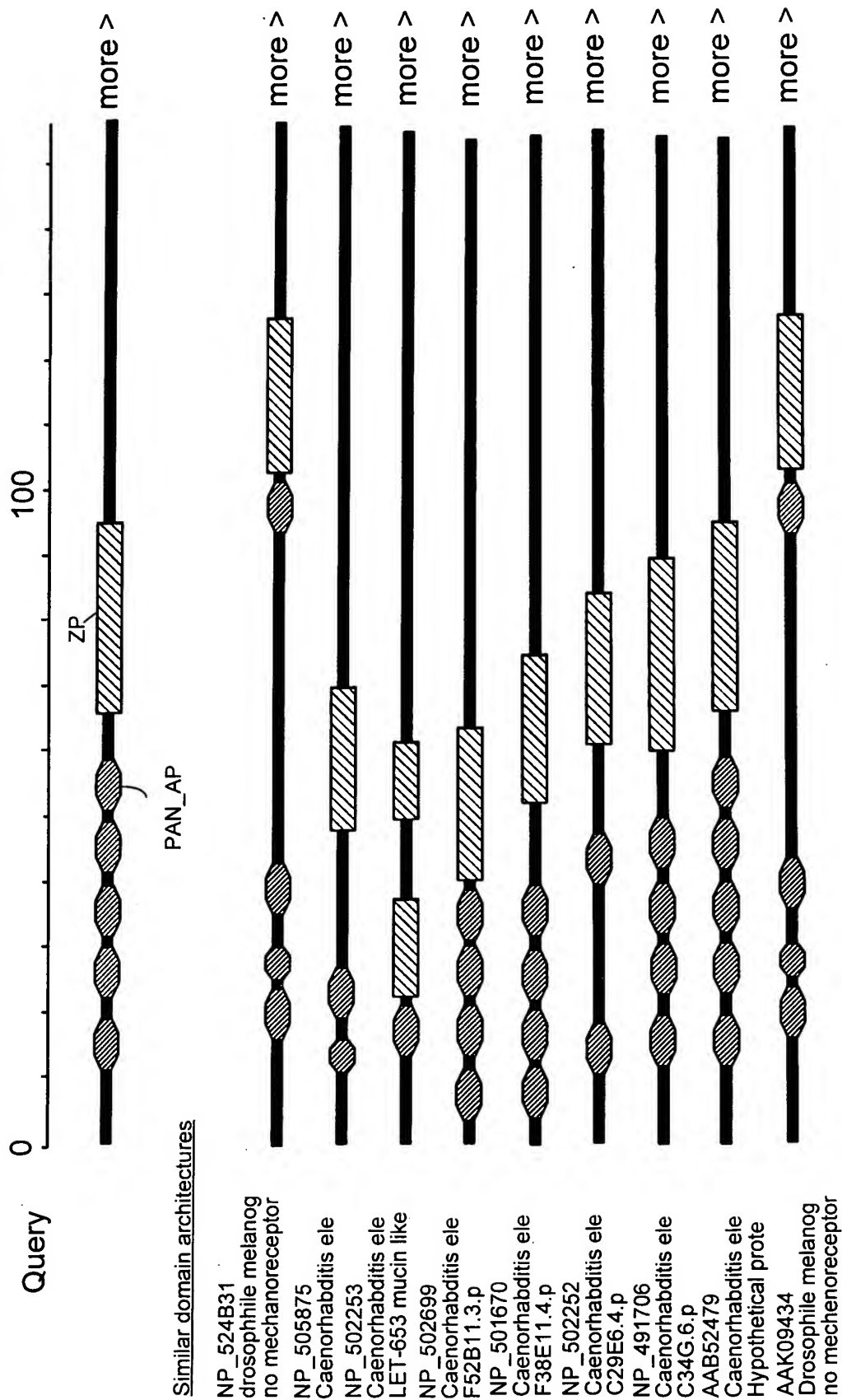


FIG. 6

SEQ ID NO 10 MVTKIPFPLFFPLFTLTKQA---YSIPLISECNSEAPVFLQQRNVSSIAGTETPLRTVPTGGFLELCSAANNCAVAKSIEKQCQLLGTMTATTLSLQDINLTARLAKSCVKSX 126
SEQ ID NO 11 -----MKVPAVLAVASVLA-----DTLPSTVLCPPETQTFVLQHN---TTVG-ARIRIPTSN-LAECSDHCSASLDCCQVEFK-DGSCAVFRAGSE---KATAGS-----QLLTKTCVKSD 101
SEQ ID NO 16 -----MKVPAVLAVASVLA-----DTLPSTVLCPPETQTFVLQHN---TTVG-ARIRIPTSN-LAECSDHCSASLDCCQVEFK-DGSCAVFRAGSE---KATAGS-----QLLTKTCVKSD 101
SEQ ID NO 17 -----MKVPAVLAVASVLA-----DTLPSTVLCPPETQTFVLQHN---TTVG-ARIRIPTSN-LAECSDHCSASLDCCQVEFK-DGSCAVFRAGSE---KATAGS-----QLLTKTCVKSD 101
SEQ ID NO 45 -----MKVPAVLAVASVLA-----DTLPSTVLCPPETQTFVLQHN---TTVG-ARIRIPTSN-LAECSDHCSASLDCCQVEFK-DGSCAVFRAGSE---KATAGS-----QLLTKTCVKSD 112
SEQ ID NO 3 -----MSKSGHLVAVILGILPLISTNIA-----SKISGVLNCKDKSPFTLQHN---STVG-ILARSLPQSG-LIDCEHSSSSDCIGVEYH-QGICRVISODKTSIYTTDRTS-----VLLSKSCVKSX 118
SEQ ID NO 12 MHLNHSASSLHYSHLIIAYFSPASIEIQIPSPACNGESPVLQHN---ATAGNVLUKR---ASTSHLVDCITDLSADECLAITTE-DRECKMLSIGES--TGHLDY-----VLLSKNCAKSA 118
SEQ ID NO 10 ruler 1.....10.....20.....30.....40.....50.....60.....70.....80.....90.....100.....110.....120.....130
SEQ ID NO 10 KICSPPHFDVHEQKILVGFAREVSAESIHQCULTACLDVDTGFECESVMYYPDLDAECILNTERDLRDPDLFVDEKEDTVVLDNNCAG---SQCCHAPYVTVYVAVE 232
SEQ ID NO 11 -----EQKILVGFAREVSAESVHRCISACINAFDTGFECESVMYYPDLDAECILNTERDLRDPDLFVDEKEDTVVLDNNCAG---SQCCHAPYVTVYVAVE 232
SEQ ID NO 16 RVCOSPPQFDLFEQRIILVGFAREVPAANIQCMAACINAFDTGFECESAMFYVDQECILNTERDLRPSLFVEESDVTIYMDNNCAGFPLVFNK-----YNYQKTFPSKQCYPPIYQYIAVE 224
SEQ ID NO 17 RVCOSPPQFDLFEQRIILVGFAREVPAANIQCMAACINAFDTGFECESAMFYVDQECILNTERDLRPSLFVEESDVTIYMDNNCAGFPLVFNK-----YNYQKTFPSKQCYPPIYQYIAVE 224
SEQ ID NO 45 RVCOSPPQFDLFEQRIILVGFAREVPAANIQCMAACINAFDTGFECESAMFYVDQECILNTERDLRPSLFVEESDVTIYMDNNCAGFPLVFNK-----YNYQKTFPSKQCYPPIYQYIAVE 224
SEQ ID NO 3 RVCOSPPQFDLFEQRIILVGFAREVPAANIQCMAACINAFDTGFECESAMFYVDQECILNTERDLRPSLFVEESDVTIYMDNNCAGFPLVFNK-----YNYQKTFPSKQCYPPIYQYIAVE 224
SEQ ID NO 12 RVCOSPPQFDLFEQRIILVGFAREVPAANIQCMAACINAFDTGFECESAMFYVDQECILNTERDLRPSLFVEESDVTIYMDNNCAGFPLVFNK-----YNYQKTFPSKQCYPPIYQYIAVE 224
SEQ ID NO 10 ruler 1.....140.....150.....160.....170.....180.....190.....200.....210.....220.....230.....240.....250.....260
SEQ ID NO 10 GKQAEELDHPEGHELTCEQKCNQRLSVSANDFNCKAFMYNNQTRSCILSDERSRPLGRANLTDKCGTYHEKKCFASPRTCRNVPSTRTVPQMLLVGFASFVFNENVPSTVMTCLDQCTNPPETGOSF 362
SEQ ID NO 11 GKQAEELDHPEGHELTCEQKCNQRLSVSANDFNCKAFMYNNQTRSCILSDERSRPLGRANLTDKCGTYHEKKCFASPRTCRNVPSTRTVPQMLLVGFASFVFNENVPSTVMTCLDQCTNPPETGOSF 362
SEQ ID NO 16 GKQAEELDHPEGHELTCEQKCNQRLSVSANDFNCKAFMYNNQTRSCILSDERSRPLGRANLTDKCGTYHEKKCFASPRTCRNVPSTRTVPQMLLVGFASFVFNENVPSTVMTCLDQCTNPPETGOSF 362
SEQ ID NO 17 GKQAEELDHPEGHELTCEQKCNQRLSVSANDFNCKAFMYNNQTRSCILSDERSRPLGRANLTDKCGTYHEKKCFASPRTCRNVPSTRTVPQMLLVGFASFVFNENVPSTVMTCLDQCTNPPETGOSF 362
SEQ ID NO 45 GKQAEELDHPEGHELTCEQKCNQRLSVSANDFNCKAFMYNNQTRSCILSDERSRPLGRANLTDKCGTYHEKKCFASPRTCRNVPSTRTVPQMLLVGFASFVFNENVPSTVMTCLDQCTNPPETGOSF 362
SEQ ID NO 3 GKQAEELDHPEGHELTCEQKCNQRLSVSANDFNCKAFMYNNQTRSCILSDERSRPLGRANLTDKCGTYHEKKCFASPRTCRNVPSTRTVPQMLLVGFASFVFNENVPSTVMTCLDQCTNPPETGOSF 362
SEQ ID NO 12 GKQAEELDHPEGHELTCEQKCNQRLSVSANDFNCKAFMYNNQTRSCILSDERSRPLGRANLTDKCGTYHEKKCFASPRTCRNVPSTRTVPQMLLVGFASFVFNENVPSTVMTCLDQCTNPPETGOSF 362
SEQ ID NO 10 ruler 1.....270.....280.....290.....300.....310.....320.....330.....340.....350.....360.....370.....380.....390
SEQ ID NO 10 VKKSMYYTNEQECILNAESRHSKPDLPFPEEDDFVVDYFDINCKLEQECIDGRTPLVIRTINSALPEGESEHVLLET-IGKGVQCCAKKCSERAPDKCRSFNFDKQAGNCNLLYLDGQGSLEPEQTKQ 491
SEQ ID NO 11 VKKSMYYTNEQECILNAESRHSKPDLPFPEEDDFVVDYFDINCKLEQECIDGRTPLVIRTINSALPEGESEHVLLET-IGKGVQCCAKKCSERAPDKCRSFNFDKQAGNCNLLYLDGQGSLEPEQTKQ 491
SEQ ID NO 16 VKKSMYYTNEQECILNAESRHSKPDLPFPEEDDFVVDYFDINCKLEQECIDGRTPLVIRTINSALPEGESEHVLLET-IGKGVQCCAKKCSERAPDKCRSFNFDKQAGNCNLLYLDGQGSLEPEQTKQ 491
SEQ ID NO 17 VKKSMYYTNEQECILNAESRHSKPDLPFPEEDDFVVDYFDINCKLEQECIDGRTPLVIRTINSALPEGESEHVLLET-IGKGVQCCAKKCSERAPDKCRSFNFDKQAGNCNLLYLDGQGSLEPEQTKQ 491
SEQ ID NO 45 VKKSMYYTNEQECILNAESRHSKPDLPFPEEDDFVVDYFDINCKLEQECIDGRTPLVIRTINSALPEGESEHVLLET-IGKGVQCCAKKCSERAPDKCRSFNFDKQAGNCNLLYLDGQGSLEPEQTKQ 491
SEQ ID NO 3 VKKSMYYTNEQECILNAESRHSKPDLPFPEEDDFVVDYFDINCKLEQECIDGRTPLVIRTINSALPEGESEHVLLET-IGKGVQCCAKKCSERAPDKCRSFNFDKQAGNCNLLYLDGQGSLEPEQTKQ 491
SEQ ID NO 12 VKKSMYYTNEQECILNAESRHSKPDLPFPEEDDFVVDYFDINCKLEQECIDGRTPLVIRTINSALPEGESEHVLLET-IGKGVQCCAKKCSERAPDKCRSFNFDKQAGNCNLLYLDGQGSLEPEQTKQ 491
SEQ ID NO 10 ruler 1.....400.....410.....420.....430.....440.....450.....460.....470.....480.....490.....500.....510.....520

FIG. 7A

614
250
588
592
591
592
587

614
250
588
592
591
592
587

691
250
634
638
637
667
651

794
250
715
718
771
742

SEQ ID NO 10 FDLVDHCLSG-----TSQLLGENSKHSPS--ACVDPEGAIFSRFLYTRWVANSNREITSSPLSKCLNLCVSGGCEGVNRRNRGSCQLFTSLLNSSPNSQDQKDEHVDYFNRICRVKESKS-DSGA
SEQ ID NO 11 VDLVDLHCLA-----ALFSRYLHTK-ORGIPAKVYKVSLSNCLCVC-AGNPTCAGANYNRRRLGDCITLFDADDAEIN-----EHTDFYKNLCVTKCIDTGASAA
SEQ ID NO 16 VDLVDLHCLA-----ALFSRYLHTK-ORGIPAKVYKVSLSNCLCVC-AGNPTCAGANYNRRRLGDCITLFDADDAEIN-----EHTDFYKNLCVTKCIDTGASAA
SEQ ID NO 17 VDLVDLHCLA-----ALFSRYLHTK-ORGIPAKVYKVSLSNCLCVC-AGNPTCAGANYNRRRLGDCITLFDADDAEIN-----EHTDFYKNLCVTKCIDTGASAA
SEQ ID NO 45 VDLVDLHCLA-----ALFSRYLHTK-ORGIPAKVYKVSLSNCLCVC-AGNPTCAGANYNRRRLGDCITLFDADDAEIN-----EHTDFYKNLCVTKCIDTGASAA
SEQ ID NO 3 FDLVDLQCLS-----TKKDCSTKNDIN-----PVKYLISHFVKYLYSQ-QPGIPTKTEKVIKIGISKCLDLC-IDSECEGLNYYNRRTGECQIFELIDGPNLKK-----SEHIDFVQNLCTKENEAGVSSA
SEQ ID NO 12 IDVDLHCLC-----QTKVCAQKN-----VTRFSRYLSI-YDAPSQFYEAATLNCNLG-AYTERCEGVNYYNRNRGCELFDEKVGNGKFS-----DFTDFYKNLCVTKCIDTGASAA
SEQ ID NO 12 IDVDLHCLC-----QTKVCAQKN-----VTRFSRYLSI-YDAPSQFYEAATLNCNLG-AYTERCEGVNYYNRNRGCELFDEKVGNGKFS-----DFTDFYKNLCVTKCIDTGASAA
ruler530.....540.....550.....560.....570.....580.....590.....600.....610.....620.....630.....640.....650

SEQ ID NO 10 ANVPKTOQAT-----AAPPSPVQITTK-----PPQIRDINN-----NNKTHKEPNKILPPQ-----SAKPINGKTGKEQLPVGSKSGFVNTNRDDG
SEQ ID NO 11 ANVPKTOQAT-----AAPPSPVQITTK-----PPQIRDINN-----NNKTHKEPNKILPPQ-----SAKPINGKTGKEQLPVGSKSGFVNTNRDDG
SEQ ID NO 16 ANVPKTOQAT-----AAPPSPVQITTK-----PPQIRDINN-----NNKTHKEPNKILPPQ-----SAKPINGKTGKEQLPVGSKSGFVNTNRDDG
SEQ ID NO 17 ANVPKTOQAT-----AAPPSPVQITTK-----PPQIRDINN-----NNKTHKEPNKILPPQ-----SAKPINGKTGKEQLPVGSKSGFVNTNRDDG
SEQ ID NO 45 ANVPKTOQAT-----AAPPSPVQITTK-----PPQIRDINN-----NNKTHKEPNKILPPQ-----SAKPINGKTGKEQLPVGSKSGFVNTNRDDG
SEQ ID NO 3 ANVPKTOQAT-----AAPPSPVQITTK-----PPQIRDINN-----NNKTHKEPNKILPPQ-----SAKPINGKTGKEQLPVGSKSGFVNTNRDDG
SEQ ID NO 12 ANVPKTOQAT-----AAPPSPVQITTK-----PPQIRDINN-----NNKTHKEPNKILPPQ-----SAKPINGKTGKEQLPVGSKSGFVNTNRDDG
ruler660.....670.....680.....690.....700.....710.....720.....730.....740.....750.....760.....770.....780

SEQ ID NO 10 ENSITGTAPP-----VDGKLIKPSQVSPISPVLPAPQEVHTICNYEGISVQIKHSPPSGVGVFVRNKNYDTCRVKLTERTALFWPWGFOQILEMKPIALINSQKHG
SEQ ID NO 11 ENSITGTAPP-----VDGKLIKPSQVSPISPVLPAPQEVHTICNYEGISVQIKHSPPSGVGVFVRNKNYDTCRVKLTERTALFWPWGFOQILEMKPIALINSQKHG
SEQ ID NO 16 ENSITGTAPP-----VDGKLIKPSQVSPISPVLPAPQEVHTICNYEGISVQIKHSPPSGVGVFVRNKNYDTCRVKLTERTALFWPWGFOQILEMKPIALINSQKHG
SEQ ID NO 17 ENSITGTAPP-----VDGKLIKPSQVSPISPVLPAPQEVHTICNYEGISVQIKHSPPSGVGVFVRNKNYDTCRVKLTERTALFWPWGFOQILEMKPIALINSQKHG
SEQ ID NO 45 ENSITGTAPP-----VDGKLIKPSQVSPISPVLPAPQEVHTICNYEGISVQIKHSPPSGVGVFVRNKNYDTCRVKLTERTALFWPWGFOQILEMKPIALINSQKHG
SEQ ID NO 3 SGVESGSLEKN-----IITAPPSIPKPEGLPVLPILIPADQVQICDYEGIKVQIKSPQSTFTGVIFVKNHYETCRVEVNSDAATLEGLPASFQMKPVTLSATSSDS
SEQ ID NO 12 SGVESGSLEKN-----IITAPPSIPKPEGLPVLPILIPADQVQICDYEGIKVQIKSPQSTFTGVIFVKNHYETCRVEVNSDAATLEGLPASFQMKPVTLSATSSDS
ruler790.....800.....810.....820.....830.....840.....850.....860.....870.....880.....890.....900.....910

FIG. 7B

Response to Notice of Allowability dated April 18, 2005
Replacement Sheet

SEQ_ID	NO	10	KGNKTHG----	EDITQLINSQKDLKRSRRLQ-RDCGLQDMNGTYKTVIVQTNNGIPGLVTSMDQLYEISCNYSMLGKGVQTAALRVHGPQPSLIQPRCKIELGNP	918
SEQ_ID	NO	11	-----	-----	250
SEQ_ID	NO	16	TKGNK----	ETPLKDEIEEFKQKAAEFRCGLVLLNGTYKSTVVIQTNNGIPGLVTSMDQLYEISCDYSSMLGGRVQAGYNNMTVTGPEANLIQPRCKIELGNP	823
SEQ_ID	NO	17	TKGNK----	ETPLKDEIEEFKQKAAEFRCGLVLLNGTYKSTVVIQTNNGIPGLVTSMDQLYEISCDYSSMLGGRVQAGYNNMTVTGPEANLIQPRCKIELGNP	827
SEQ_ID	NO	45	TKGNK----	ETPLKEEIEEFKQKAAEFRCGLVLLNGTYKSTVVIQTNNGIPGLVTSMDQLYEISCDYSSMLGGRVQAGYNNMTVTGPEANLIQPRCKIELGNP	826
SEQ_ID	NO	3	TSSQN----	ITS-----	873
SEQ_ID	NO	12	ANIQP----	-----	850
SEQ_ID	NO	12	ruler920.....930.....940.....950.....960.....970.....980.....990.....1000.....1010.....1020.....1030.....1040	
SEQ_ID	NO	10	VLQMGPVRSRQSGEGLIQAKLGDILELKWEIFMAWDEELDFLVRDCFAEPGTS----	GNQGERLPLIENGCTPAVAOKLIPNPIKAINSAVKLTYLQAPRFDSSPAIRITCHLELCKENCKSVNCKFN	1045
SEQ_ID	NO	11	-----	-----	250
SEQ_ID	NO	16	VLMOLLN----	GDGTEQPLVQAKLGDILELRWEIMAMDEELDFPVKNCHAEPPGAVGKAGAGEKRLRIDGGCTPAVAOKLIPGAIEIKSSAVKTTKQAPRFDSSASIRVTCVEIICKGDCPEVCALT	949
SEQ_ID	NO	17	VLMOLLN----	GDGTEQPLVQAKLGDILELRWEIMAMDEELDFPVKNCHAEPPGAVGKAGAGEKRLRIDGGCTPAVAOKLIPGAIEIKSSAVKTTKQAPRFDSSASIRVTCVEIICKGDCPEVCALT	953
SEQ_ID	NO	45	VLMOLLN----	GDGTEQPLVQAKLGDILELRWEIMAMDEELDFPVKNCHAEPPGAVGKAGAGEKRLRIDGGCTPAVAOKLIPGAIEIKSSAVKTTKQAPRFDSSASIRVTCVEIICKGDCPEVCALT	952
SEQ_ID	NO	3	VLQMNA----	GTGDHQPILQAKLGDILELRWEIMAMDEELDFPVKDCFAEPGTS-----	996
SEQ_ID	NO	12	VLQMOLS----	GGEPVQAKLGDILELRWEIMAM-----	881
SEQ_ID	NO	12	ruler1050.....1060.....1070.....1080.....1090.....1100.....1110.....1120.....1130.....1140.....1150.....1160.....1170	
SEQ_ID	NO	10	DGIKESWGRKRFRFAIDNNINRKNVEKFEFTRRFPVPRPAQATTSLVIVDPLQQNSVIKTEQQQPFISHSISKQIFENNNKENNNITKAKKSSSLPEAFTEAAGRKINLELTNTNSEQOQLCLHK	1175	
SEQ_ID	NO	11	-----	-----	250
SEQ_ID	NO	16	GGVKSFRKREVSNN----	IEEFETNRYLIPRSHATTSIVIIDPLQQVNEPV-----	1030
SEQ_ID	NO	17	GGVKSFRKREVSNN----	IEEFETNRYLIPRSHATTSIVIIDPLQQVNEPV-----	1034
SEQ_ID	NO	45	GGVKSFRKREVSNN----	IEEFETNRYLIPRSHATTSIVIIDPLQQVNEPV-----	1033
SEQ_ID	NO	3	GESKQSWGRKRRIHIEDDT----	ITEFETNRYKVPFSQATTSLLILDPLQNNIEPAS-----	1085
SEQ_ID	NO	12	-----	-----	881
SEQ_ID	NO	12	ruler1180.....1190.....1200.....1210.....1220.....1230.....1240.....1250.....1260.....1270.....1280.....1290.....1300	
SEQ_ID	NO	10	WTLGGVFGTLLTLIVVQSGVAAKHLINRPIVGRKI--	1210	
SEQ_ID	NO	11	-----	-----	250
SEQ_ID	NO	16	VTVPFPGT LAVLILGOTVVIHAYVRRPFSSEKTA--	1065	
SEQ_ID	NO	17	VTVPFPGT LAVLILGOTVVIHAYVRRPFSSEKTA--	1069	
SEQ_ID	NO	45	ITVPFPGT LAVLILGOTVVIHAYVRRPFSSEKTA--	1068	
SEQ_ID	NO	3	ITLPSVFGVLLSLIVVQAVIVTNIYIFKRVMSRKITN	1122	
SEQ_ID	NO	12	-----	-----	881
SEQ_ID	NO	12	ruler1310.....1320.....1330.....	

FIG. 7C

FIG. 7C

F/G/8